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Relationship Between Anxiety and Level of Aspiration Among College Male Physical Education Students

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Relationship Between Anxiety and Level of Aspiration Among College Male Physical Education Students

(TITLE)

BY

Taoheed Abdul Adedoja

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Master of Science in Physical Education

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

Summer 1981
YEAR

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RELATIONSHIP BETWEEN ANXIETY AND LEVEL OF ASPIRATION AMONG COLLEGE PHYSICAL EDUCATION MALE STUDENTS

BY

TAOHEED ABDUL ADEDOJA

Bsc in Education (Physical Education) University of Ife, Nigeria, 1978.

ABSTRACT OF A THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Science in Physical Education at the Graduate
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CHARLESTON, ILLINOIS
1981

Relationship Between Anxiety and Level of Aspiration Among College Physical Education Male Students

ABSTRACT

The primary purpose of this study was to investigate the relationship between anxiety and level of aspiration among college physical education male students.

Thirty-one male physical education students, enrolled in the professional physical education classes at Eastern Illinois University, served as volunteers for the study.

Each subject completed a 40 item Anxiety Scale Questionnaire (ASQ), designed by the Institute for Personality and Anxiety Testing (IPAT), for measurement of anxiety level. The level of aspiration (Loa) scores were obtained from each subject's estimations of scores and performances on the grip strength tests administered.

The scores obtained from the anxiety questionnaire and the level of aspiration scores were used in finding the relationship between anxiety and level of aspiration, using the Pearson Product Moment Correlation.

The t-test was applied in determining if there was any significant difference between the level of aspiration of high and moderate anxiety subjects; between moderate and low anxiety subjects; and between high and low anxiety subjects.

The chi square was used in finding whether the three anxiety groups differ significantly in the estimation of their achievement scores to be above or below their actual scores on the strength tests.

The .05 level of significance was used in determining the significance of all the statistical tests applied in this study.

The results of the study showed that: there is no relationship

between anxiety and level of aspiration among Eastern Illinois University college physical education students; there is no difference in the level of aspiration of high and moderate anxiety subjects, and moderate and low anxiety subjects tested. The study showed that a difference exists in the level of aspiration scores of the high and low anxiety subjects tested.

The study showed that there is no difference among the three anxiety groups (high, moderate, and low) in the estimation of the achievement scores to be above or below their actual scores on the strength test.

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CHAPTER 1

INTRODUCTION

Most research in the area of anxiety has been concerned with comparing performance of anxious versus nonanxious subjects on motor skills because of the influence of anxiety on human behaviors or personality. Standards of excellence or success should not only be judged by one's performance but by the individual's level of aspiration.

Disposition to achieve, according to Fisher (31:222), is a strong personality pattern. Hoppe (45:1-6) also had a strong view that an individual's feeling about personal success was dependent primarily upon the extent to which he felt he had reached some aspired goals, and not upon an absolute score obtained. Brown and Shaw (15:71) agreed that being highly skilled in a particular area can only account for a portion of success, and having the appropriate psychological components adds another dimension to becoming a successful performer. Singer (86:280-283) suggested that anxiety level should be assessed in order to determine the manner in which an individual or group of individuals function under a competitive circumstance. Frost (36:57) was also of the opinion that the true measure for success of an individual must be his achievement in terms of his potential and the degree of self-fulfillment.

Need for Study

As coaches and physical education teachers become more concerned about the motivational aspect of learning, coaching, and competition, study into the relationship between anxiety level and level of aspiration

could have important implications for physical education.

Studies are needed that will contribute to a better understanding of the relationship between two personality variables, anxiety and level of aspiration.

Purpose of the Study

The purpose of this study was to investigate the relationship between anxiety level and level of aspiration among college physical education male students.

Statement of Null Hypothesis

In the conduct of the study, the null hypothesis was assumed to the effect that there is no relationship between anxiety level and level of aspiration among college physical education male students.

Limitation of the Study

Physical education majors enrolled in the professional classes at Eastern Illinois University were the only participants in the study.

The participants were volunteers and therefore, were not randomly selected from the population of physical education students.

Definition of Terms

The following terms have been defined as they were employed in this study:

Level of Aspiration

Level of Aspiration was defined by Frost (37:59) as a person's expectation, goals or claims on his own future achievement in a given task. It was also referred to as the level of future performance in a

familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach. Dembo (26), who introduced the concept of Level of Aspiration (Loa) described it as a method for the study of goal setting and factor associated with changes in goal.

Arousal

Arousal was defined by Martens (64:9) as the intensity dimension of behavior. It was also described as a state of the organism varying on a continuum from deep sleep to intense excitement.

Stress

Stress was explained by McGrath (71:493-502) as an imbalance between the perceived demand and response capability, under conditions where failure to meet demands has important (perceived) consequences.

Self-Image

Self image was explained by Frost (36:57) in the following ways:

1. The way in which an individual perceives himself.
2. The way in which an individual thinks others perceive him.

Self-Actualization

Self-actualization was defined by Annarino (1:55) as an awareness of what the body is capable of doing at a specific time and a willingness to set a level of aspiration that is within reach and be motivated to seek that level.

Threat

Threat was described by Martens (64:9) as the perception of physical or psychological danger.

CHAPTER 2

REVIEW OF THE LITERATURE

Extensive research work has been done on anxiety and the difference between state anxiety and trait anxiety. The relationship between anxiety and motor performance has also received full research attention. Some studies have also investigated the relationship between anxiety and self-esteem; the relationship between motor performance and level of aspiration; and effects of success and failure on level of aspiration as related to achievement motives. The following reviews are examples of the information available in these areas.

State-Trait Anxiety Differentiation

After reviewing a number of theories on anxiety, May (68) noted that "anxiety has the following properties - it is a diffuse apprehension; it differs from fear in that it is unspecific, vague and objectless; it is associated with feelings of uncertainty and helplessness and it involves a threat to the personality."

Anxiety was originally conceived and assessed as a stable and unitary phenomenon. However, the factor analytic studies of Cattel and Scheier (20:351-388) led to the identification of two distinct anxiety factors, labelled STATE ANXIETY and TRAIT ANXIETY. Cattel (18:23-62) offered two explanations of anxiety. The one which he believed was best supported by his data was that anxiety is a function of the magnitude of all unfulfilled needs (or ergs) and the degree of uncertainty that the needs will be fulfilled. The second hypothesis upon which he expressed

doubt was that anxiety is specific to the fear erg, and results from the threat that occurs when there is anticipation of deprivation of any or all ergs.

Speilberger (91-17) further differentiated STATE and TRAIT anxiety. He described STATE anxiety as follows:

> an existing or immediate emotional state characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system.
> According to Cattel (18:23-62), physiological variables such as systolic blood pressure and respiration rate have high loadings on state anxiety factors.

Speilberger described TRAIT anxiety as follows:

> a motive or acquired behavioral disposition that predisposes an individual to perceive a wide range of objectively dangerous circumstance as threatening and to respond to these with State anxiety reactions disproportionate in intensity to the magnitude of the objective danger.

Examples of Trait anxiety given by Cattel (19) include "factor loadings on such variables as tendency to embarrassment, ego weakness or guilt proneness."

Spielberger (90) developed the State-Trait anxiety inventory (STAI) to assess individual differences in the level of the two anxiety factors, state anxiety and trait anxiety. The State anxiety scale measured the level of a transitory emotional state that varies in intensity in different situations, whereas Trait anxiety scale assessed level of characteristic anxiety proneness.

Results of several studies seem to support Spielberg's hypothesis that the state anxiety level of high trait anxiety subjects increases in situations involving threats to self-esteem. For example, in a study by Burton (16:139-144), he used the STAI and indicated that a positive relationship existed between trait anxiety level and level of state anxiety

in some physical education learning situations.

Spielberger found that high anxiety trait (A-trait) subjects are particularly threatened by situations involving evaluation of their personal adequacy.

Wankel (94:182) stated that the state-trait anxiety differentiation has important performance implications in that trait anxiety will affect performance only through its influence on state anxiety in the performance situation. Wankel concluded that high trait anxious subjects will experience correspondingly greater state anxiety than low trait anxious subjects. Rappaport and Katkin (80:340) also reported that high anxiety trait (A-trait) individuals in ego threatening conditions manifest greater changes in Anxiety state (A-state) than low A-trait individuals for physical danger situations.

Katkin (54:324-333) found that threat of shock produced increases in A-state, but that the observed changes were not related to A-trait level as assessed by the Taylor Manifest Anxiety Scale, (MAS). Auerbach (9:264-271) also reported similar findings.

Summary of Research on Relationship Between Anxiety and Performance

The relationship between anxiety and performance has been explained by two theories. The Drive theory by Hull (47) postulated a linear relationship between arousal and performance. (See figure 1). As the arousal level of a person increases, the performance level also increases according to the Drive theory. Increased arousal, therefore, improves performance in some tasks. The Drive theory, according to singer (86:280-283), is an explanation for movements of a short, explosive or ballistic nature.

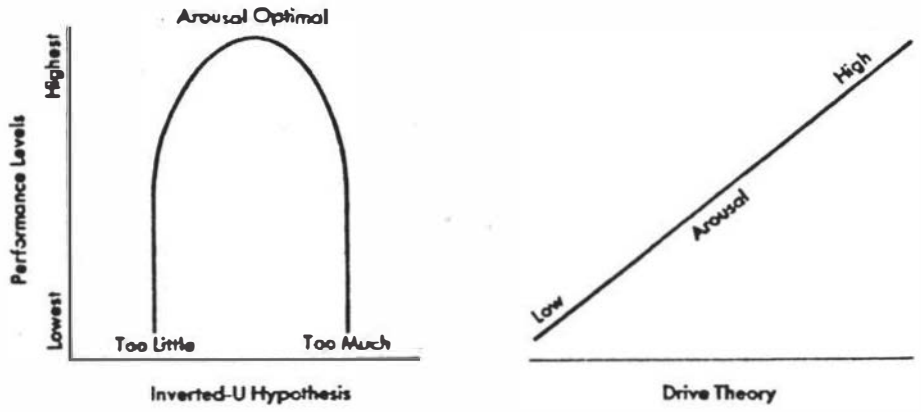


Figure 1

Comparison of Drive Theory and
Inverted-U Hypothesis

The inverted-U hypothesis, according to Singer, predicts a nonmonotonic relationship between drive level and performance. According to him, performance improves with increase in arousal to a point. Comparing the Drive theory with the inverted-U hypothesis, Martens (67:252-260) favored the inverted-U over the Drive theory and Singer (86:280-283) suggested that the Drive theory seems best to describe tasks that involve effort while the inverted-U hypothesis fits tasks requiring control, finesse, and complex skillful execution. Research evidence as summarized by Martens (67:252-260) also indicated a curvilinear relationship between anxiety and performance on complex motor tasks. Martens found no difference between high and low anxiety subjects when placed in an arousing condition while completing a complex motor task. However, contrary to Marten's conclusion, Singer (86:280-283) suggested that studies generally show that high-anxiety people do worse than those low in anxiety in complex tasks. Also, those who score low on anxiety tests perform more effectively under normal conditions. Howell (46:22-32) employed a simple motor performance to examine the relationship between anxiety and performance. His research consisted of hitting a ball with an arm movement, reversing directions to touch a key, and then hitting a second ball. There was no particular demand for accuracy but speed was emphasized. He used electric shock to produce motivation and tension. The most tense half of his subjects exhibited a significantly greater increase in speed of motor performance under motivation than was observed in the less tense subjects.

Marilyn et al (63:587) investigated the arousal and anxiety correlates of gymnastic performance and concluded that complex tasks are performed better when one's drive is low, and simple tasks are performed better when one's drive is high. The relationship between psychological

arousal and subsequent motor performance, according to them, takes the form of an inverted-U.

Farber and Spence (28:120-125), using the Taylor Anxiety Scale, tested a high anxiety group and a low anxiety group in an eyelid conditioning experiment. The anxiety subjects gave a larger number of conditioned responses than the non-anxious subjects. The performance of the anxious subjects was significantly poorer than that of the non-anxious.

Using a real life situation to study the effects of stress on serial learning and conditioning, Beam (12:184) found that stress facilitated conditioning but hampered serial learning. The stress group (those taking a doctoral examination) made significantly more conditioned responses than did the non-stress group but made significantly more errors and took longer to reach a criterion in serial learning.

The completed research of Duffy (27) and Fisher (32) lends additional credence to the hypothesis that emotions, specifically excitement and arousal, might reasonably affect the outcome of some athletic performances.

Carron (17:463-469) stated that the ability to cope with stress early in learning is a function of one's anxiety state. Using a stabilometer task and electric shocks, he concluded that stress was detrimental to the performance of highly anxious subjects in the early stages of practice. Low-anxiety objects were hardly affected at all.

Similarly, Parsons et al (77:457-466) reported that highly anxious individuals are more disturbed by stressful conditions and have greater difficulty in novel situations than less anxious persons. They also found that stress was detrimental to steadiness.

Baker (10) also found that stress inhibited the performance of

high anxiety subjects, and Breen (14) suggested that there is motor incoordination even among normal subjects under stress.

Anxiety and Competition

Many sport personality researchers have focused attention on anxiety responses to competitive sport situations. The conceptual distinction between A-trait and A-state by Spielberger (91:17) further explained the effect of anxiety on competitive sport situations. Competitive trait anxiety is a specific modification of the A-trait construct by Spielberger. According to Martens (65:23-27), competitive A-trait is a construct that describes individual differences in the tendency to perceive competitive situations as threatening and to respond to these situations with A-state reactions of varying intensity.

Anxiety-Trait and Competition

The existence of a relationship between sport competition and anxiety-trait was shown by Ogilvie (76:156-162), based on his review of the sport personality literature. He concluded that athletes, particularly superior athletes, are more emotionally stable, have lower levels of anxiety-trait, and greater resistance to emotional stress. No specific sport or sex was mentioned in his study.

However, Husman (48), Johnson and Coffer (50) and Morgan (72:7-13) did not agree with Ogilvie. Each of them concluded that there were no consistent differences in anxiety-trait among participants when compared with nonparticipants or among participants of different skills.

Anxiety-State and Competition

Some research studies have shown that Anxiety state and not

Anxiety trait is consistently related to task performance. Spielberg's trait-state theory of anxiety predicted that high Anxiety trait subjects manifest greater increases in Anxiety-state than low-Anxiety trait.

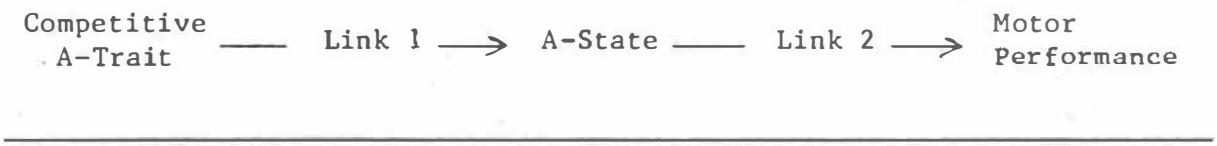
In an exploratory study using the House-Tree-Person-Projective personality test, Johnson and Hutton (51:49-53) investigated changes in what they termed "neurotic signs." Eight college wrestlers took the test prior to the wrestling season, four to five hours before the first match of the season, and the morning after the contest. Johnson and Hutton suggested that the wrestlers displayed increased "neurotic signs", right before the match and then returned to normal the day after the contest.

Martens (66:84) also stated that Anxiety trait is theorized to predict motor performance. Martens proposed a model of the relationship among A-trait, A-state and motor performance.

Morgan (72:7-13) administered three forms of the IPAT 8-parallel-form anxiety test to seven college wrestlers at the University of Missouri. The first test was given before the season began, a second test was given 45-60 minutes prior to a match judged easy by the coach, and a third test was administered prior to a match judged difficult by the coach. The pre-match anxiety scores were lower than the preseason scores, but there was a difference in anxiety scores for the easy and difficult matches. Subsequently, Morgan and Hammer (73) tested wrestlers from four colleges with the same IPAT scale. The test was administered in the early part of the season, after the weigh-in in the state tournament (four hours before competing), one hour before the first match and 15-30 minutes after the tournament. Unlike Morgan's study, increases in anxiety were observed one hour before the match and a considerable reduction in anxiety was noted after the tournament. The post-tournament anxiety level was below

the initial early-season anxiety level.

The following illustrates the relationship between competitive A-trait and motor performance as mediated by A-states.



Relationship Between Anxiety and Self-Esteem

The division of the self into "Me" and "I" has been traced to James (49). Two primary self feelings, complacency and dissatisfaction were depicted by James as endowments which influence human behavior.

Some research findings have focused on the identification of different personality variables that relate to self concept. A number of studies, according to Ryan and Lakie (84:380) have also attempted to state how individual differences in strength of various motives influence behavior in competitive situations, or in situations where achievement is emphasized. Much of such findings, according to them, has centered around two motives, the achievement motive and anxiety. In general, the achievement motive was reported to be positively related to performance by Atkinson (3:20) and McClelland et al (69:306-321).

Rogers (83) studied the influence of anxiety on self-esteem and stated that anxiety is experienced when the individual perceives something that is a threat to his self-concept. According to Rogers, discrepancies between the self, as conceived, and perceptions of reality which can not be ignored, generate tension. It is this tension that provides

the basis for anxiety. Rogers also reported that "...if the individual becomes to any degree aware of this tension or discrepancy, he feels anxious, feels that he is not united or integrated, that he is unsure of his direction."

Atkinson (5) suggested that a "fear of failure" motive is reflected in measures of Anxiety Trait. Spence and Spence (89:137-142) also argued that individuals with high Anxiety-Trait tend to perform more poorly than persons who are low in Anxiety-Trait under conditions that involve ego-involving instructions, negative evaluation of performance or failure.

However, Lucas (60:417-420) reported that in conditions where ego-involvement is low, a number of studies found anxiety to be unrelated to performance but that in conditions of high ego-involvement, anxiety was found to interfere with performance.

Other studies have demonstrated the role of positive confidence in general anxiety. One of such studies is found in the work of Wheeler (96:33-35) who tested 481 male and female high school students on the Anxiety Scale Questionnaire (ASQ) and on a scale designed specifically to measure self-concept. He found a significant, inverse relationship between anxiety and self-concept. Individuals with higher anxiety, according to his study, reported less favorable views of themselves.

Chedekel (21) also studied dropout proneness in adolescent boys and found significant negative relationships between anxiety scores and degree of self-actualization factors like independence, positive self-regard, self-acceptance, and realism were assessed by Chedekel.

Giddings (39) found in his study, that self ratings by less anxious counselors in training were significantly higher than those more

anxious, who tended to be far more critical of themselves. Blum (13) also observed this inverse relationship between self-esteem and anxiety. His findings suggested that individuals who maintain nonconforming opinions despite peer pressure show a drop in self-esteem and an increase in anxiety. Blum further stated that when the individual at last finds himself in agreement with a referent body, the individual will experience a rise in self-esteem and a corresponding drop in anxiety level.

In summary, the interactive relationship between self-esteem and anxiety is illustrated below.

High anxiety $\rightleftharpoons$ Low self-esteem

Low anxiety $\rightleftharpoons$ High self-esteem

Studies Related to Performance and Level of Aspiration

Several investigators have shown a relationship between performance and level of aspiration. For example, Locke (59:417-420) observed that persons who set high goals performed better than those who set low goals and those who received only knowledge of their score, but did not specify a goal. Clarke and Clarke (23:19-22) found that nine-year old boys who expressed higher levels of aspiration were physically superior in size and strength. The smaller and less strong boys generally chose lower aspiration levels that appeared to insure some measure of success.

From a study of highly skilled swimmers, Anderson (2) found that highly skilled swimmers set low positive goals for familiar tasks but

large negative goals for unfamiliar tasks. These values, according to him, later changed to low positive goal discrepancy.

Frank (34:19-35) reported that aspiration levels are relatively permanent characteristics that do not depend on the type of ability required by the task; rather, persistent individual differences are factors responsible for goal setting. In another study, Frank (35:159-171) observed that the level of performance on one task will influence one's level of aspiration and other tasks. This has been supported with the findings of Gardner (38:521) who reported that success and failure will cause adjustments in one's level of aspiration.

Patterson (78:113) studied the relationship between performance and level of aspiration among junior high school girls. In his study, 120 junior high school girls were tested for performance and level of aspiration in three tasks: grip strength, back lift strength, and isometric set-up task. For each task, three trials were given and a statement of level of aspiration was recorded after each performance. The ninth grade girls were more realistic in goal setting for both strength and endurance tasks than the seventh grade girls.

In addition to one's performance on any task, some research findings observed that one's relationship with the social group is a factor in level of aspiration. Hilgard et al (44:411-421) reported that group pressure may be a valid influence on private goal setting if the desire for social conformity has become internalized. Gould (41:461-473) also agreed that aspiration may be a useful tool for studying some factors involved in social change.

Success in one's performance is another factor that has been reported to have some bearing on level of aspiration. Festinger (30:184-

200) stressed success in level of aspiration and stated that a person who is asked to set a goal he expects to reach, will react more realistically than one who is asked to set a goal he would like to reach. Festinger also reported that shifts in discrepancy scores are accompanied by changes in the meaning of the situation.

Lewin (58) strongly felt that levels of aspiration are determined by realism, past experience, standards of the social group, goal structure of the activity and desire, fear and expectancy.

The various studies on the relationship between performance and level of aspiration agreed that setting an appropriate amount of goal aids performance. Discrepancies between level of aspiration scores have also been reported from one task to another and was specifically stated by Cratty (24:31) that the unique characteristics of the task influence aspiration level. Cratty (25:34) also stated that aspiration levels in motor skills are significantly different in late adolescents from their aspirations in fine motor skills.

Studies on Experiences of Success and Failure as Related to Level of Aspiration

In studies of level of aspiration, the research literature reviewed by Moulton (74:399) indicated that the most typical reaction to a success experience is a moderate rise in level of aspiration and that the usual reaction to failure is a moderate drop in level of aspiration. He stated that a minority of subjects on occasion, react to success or failure in a paradoxical manner. That is, they respond to failure by raising level of aspiration and to success by lowering it.

However, a model of risk taking developed by Atkinson (3:20) stated that reactions to success or failure, whether they are typical or

atypical, are predictable from a knowledge of individual differences in the relative strength of motives to achieve success (Ms) and motive to avoid failure (Maf).

Atkinson (3:24) further stated that maximum motivation, either to approach success or to avoid failure is aroused by tasks which have a probability of success (Ps) of .50. When individuals whose motive to approach success exceeds their motive to avoid failure (approach oriented) are presented with a set of achievement tasks which vary in subjective probability of success, they tend to choose the task which has a subjective probability closest to .50. On the other hand, individuals for whom the avoidance motive is predominant (avoidance oriented) will seek to avoid achievement tasks because all such tasks tend to arouse avoidance tendencies in these individuals. However, if forced to make a choice from among a set of achievement tasks, avoidance-oriented individuals will tend to select tasks for which Ps is as far from .50 as possible, thus selecting tasks from either the easy or the difficult range. Atkinson's studies have been confirmed by the previous studies of Atkinson et al (8:27-36), McClelland (69:306-321), and Mahone (61:253-256).

In a study to investigate the implications of Atkinson's risk taking model, Moulton (75:399-405) designed an experimental situation involving 93 high school male students and obtained a confirmation of Atkinson's risk taking model. In Moulton's study, subjects were presented with three tasks that varied widely in level of difficulty: one was easy (Ps=.75), one was difficult (Ps=.25), and one was of intermediate difficulty (Ps=-.50). Subjects were asked to perform the task of intermediate difficulty. Following either success or failure on the task of intermediate difficulty, subjects were asked to choose which one of the two re-

maining tasks they would like to perform. The subjects' choices were equivalent to raising of level of aspiration after success or lowering of level of aspiration after failure (the typical shift). The result of Moulton's study indicated that atypical shifts in level of aspiration following success or failure occurred more frequently among subjects whose motivation to avoid failure exceeded motivation to approach success than among subjects who showed the opposite motive pattern. Moulton's study showed that 15 subjects made the atypical shift and that the shift occurred more frequently among subjects whose resultant motivation was avoidance oriented.

It was also evident from the result that the atypical shift is relatively rare among subjects for whom there was not a clear preponderance of approach or avoidance motivation.

The finding represents a confirmation of the effects of success and failure on shifts in level of aspiration.

Summary

Anxiety, originally conceived as a unitary phenomenon, has been identified by most researchers as two distinct factors, namely, STATE anxiety and TRAIT anxiety. The review of related literature revealed considerable agreement among researchers that STATE anxiety is an immediate or existing emotional state and TRAIT anxiety is an acquired behavioral disposition that predisposes an individual to perceive certain situations as threatening.

The various studies on anxiety and performance indicated that anxiety may improve or impair performance, depending upon difficulty of the task and the anxiety state of the subjects. Most studies also agreed

that anxiety may facilitate performance in a simple task and that performance may be impaired in a complex task. Most researchers also showed that state anxiety and not trait anxiety is consistently related to performance and competition.

Research into the relationship between self-esteem and anxiety has been well documented. It has been found that there is an interactive inverse relationship between self-esteem and anxiety. That is, a person with high anxiety has low self-esteem and that a person with low anxiety tends to have a high self-esteem. A summary of the relationship between self-esteem and anxiety can be found in the work of Wheeler (96:33-35) who indicated that the individual with higher anxiety reported less favorable views of himself.

Most studies that have been conducted to investigate the relationship between performance and level of aspiration on the one hand, and the effect of level of aspiration on performance on the other, agreed that level of aspiration is an important psychological factor in one's performance. Various studies also agreed that the level of aspiration in one task will influence one's level of aspiration on other tasks.

A few studies on the effects of success and failure on level of aspiration as related to achievement motives reported that individuals high in fear of failure and low in need for achievement may react in an atypical manner to success or failure experiences. That is, they raise their level of aspiration following failure and lower it after success.

Research literature showed very little investigation into the relationship between anxiety state and level of aspiration, which warranted this study.

CHAPTER 3

METHODS

The study was designed to investigate the relationship between anxiety level and level of aspiration among physical education students. The description of the subjects, explanation of data collection and the testing design, and types of measurements taken are included in this chapter.

Subjects

Thirty-one male undergraduate physical education majors, enrolled in the professional physical education classes at Eastern Illinois University, during the Spring term of 1981, volunteered to participate in the study.

Collection of Data and Test Design

The Anxiety Scale Questionnaire (ASQ) developed by the Institute for Personality and Ability Testing (IPAT) (43), was used to measure the subjects' anxiety levels.

The level of aspiration (Loa) scores were obtained from the grip strength tests administered to each subject and their estimations of scores, as fully described in this chapter.

Anxiety Test

Each subject was asked to complete the Anxiety Scale Questionnaire (ASQ) (see copy in appendix). The ASQ comprised of 40 questions specifically designed by IPAT for a self-description of subjects' anxiety

states - apprehension, tension, emotionality and suspiciousness. The questionnaire was titled "self analysis form" rather than as an anxiety test in order to reduce the biases that usually go with anxiety questionnaires. Full instructions were read aloud and explained to the subject prior to taking the test. For convenience, all answers were recorded directly on the test papers. All subjects were seated in a class for the test and it took an average of 10 minutes for a subject to complete the questionnaire. The questionnaire was collected after completion and scored as directed by the IPAT scoring procedure, which was described by Krug et al (55:3-12).

The Anxiety Scale Questionnaire was chosen because of its short length, ease in scoring, and availability. The test also specifically consisted of adjectives, words and situations that best described STATE anxiety. The literature review showed that STATE anxiety is more related to performance situations.

The Handbook for the IPAT anxiety scale (43) stated that the ASQ was developed as a means of getting clinical anxiety information in a rapid, objective, and standard manner.

> The ASQ, according to Krug et al (55:3-12) is brief and nonstressful...appropriate for chronological ages of 14 and 15 years on upward throughout adulthood. The test is easily administered and provides greater willingness to be frank and objective and less likelihood of distortion.

Cattel (19) agreed that the ASQ included the best 40 anxiety items among several thousand personality items examined to date.

Evidence from a number of studies by Rickels and Cattel (82:257-264), Templer (93:161-169), Kahn et al (53), and Barrat (11:547-554) have reported the validity coefficient of ASQ as ranging from .62 to .89.

Level of Aspiration (Loa) Score

Following the administration of the anxiety test, the subjects' level of Aspiration (Loa) scores were obtained individually. Clarke and Clarke (22:356-357), used a similar procedure for validating level of Aspiration (Loa) scores.

After instructing the subject on techniques of the strength test (performed with a grip dynamometer and with subject's dominant hand), the subject's hand grip strength score was taken and the subject was informed of his score. This was recorded as (P1).

The subject was asked to estimate what score he believed he could obtain on a second strength test effort. The subject's estimated score was recorded as his first aspiration score and referred to as (A1).

The same strength test was performed the second time and the subject was informed of his score. This was referred to as (P2).

The subject was asked again to estimate what score he believed he could obtain on a third strength test effort (in order to obtain a second aspiration score) (A2).

A third strength test was administered. From the scores obtained in the above procedures, two level of Aspiration scores were obtained;

First Aspiration Discrepancy, referred to as (AD1)

Second Aspiration Discrepancy, referred to as (AD2)

The first Aspiration Discrepancy (AD1) score was obtained by finding the difference between P1 and A1. The second Aspiration Discrepancy (AD2) score was obtained by computing the difference between P2 and A2.

Statistical Analysis

Based on the raw scores obtained from the anxiety questionnaire

and the raw scores obtained from the subjects' second Aspiration Discrepancy, the Person Product Moment ("r") correlation coefficient was computed to find the relationship between the subjects' anxiety level and level of aspiration (Loa). A table of correlation coefficient by Fisher and Yates (33) was consulted to determine the significance of the "r" (at the .05 level). For further interpretation of the "r" obtained, the coefficient of determination as described by Weber and Lamb (95) was computed.

An analysis of the comparisons among high anxiety (Ha), moderate anciety (Ma) and low anxiety (La) subjects on their level of aspiration scores (second aspiration discrepancy) was determined by a t-test at the .05 level of significance. The subjects who scored at the 75th percentile or above were grouped under high anxiety; the subjects who scored at the 25th percentile or below were considered to have low anxiety; and the subjects with percentile scores of between 26 and 74 were regarded as moderate anxiety.

In order to examine whether a significant difference existed within the high, moderate and low anxiety groups in the estimation of their performance to be higher or lower, a chi square was computed. The .05 level of significance was used.

CHAPTER 4

ANALYSIS AND DISCUSSION OF DATA

The primary purpose of this study was to investigate the relationship between anxiety and level of aspiration among physical education male undergraduate students. The study also compared the level of aspiration among highly anxious, moderately anxious and low anxious subjects.

Male physical education students (n=31), enrolled in professional physical education classes at Eastern Illinois University served as volunteers for the study.

The presentation of the findings along with a discussion have been included in this chapter.

Presentation of the Findings

The presentation of the findings has been divided into the following three parts: the relationship between anxiety level and level of aspiration; comparison of mean differences among the three anxiety groups on the Loa; and the subjects' estimates of their achievement scores.

Relationship Between Anxiety and Level of Aspiration

The Pearson Product Moment Correlation, computed to investigate the relationship between anxiety and level of aspiration, showed a low negative relationship. The significance table for correlation coefficient showed that the correlation was not significant. ($r = -.16$, $P > .05$). The coefficient of determination was 2.56 percent, which indicated no common variance.

Comparison of Mean Differences of Loa Scores

A statistical analysis of the difference between High anxiety (Ha) group (n=9) and Moderate anxiety (Ma) group (M=15) on their Loa scores, as shown in Table One, revealed that the two groups did not differ significantly in level of aspiration. ($t(df=22)=1.717$, $P>.05$)

A comparison of Mean Loa between Moderate anxiety (Ma) (n=15) and Low anxiety (La) (n=7) has been summarized in Table Two and showed no significant differences. ($t(df=20)=1.797, P>.05$)

However, the Mean Loa scores of Ha and La groups, as illustrated in Table Three, showed a significant difference between the two groups. ($t(df=14)=2.057, P<.05$)

Subjects Estimates of Their Achievement Scores

Table Four shows the number of subjects, among the three anxiety groups, that estimated their achievement scores either above or below their actual scores on the strength tests. A chi square (x^2) indicated that the difference among the three groups was not significant. ($x^2(df=2)=5.991, P>.05$)

Summarized in Table Five, are the mean scores and standard deviations of the strength tests, and the level of aspiration scores for the high, moderate, and low anxious groups.

Discussion of the Findings

The present study found a low negative relationship between level of anxiety and level of aspiration, which appeared to support the result of a recent study by Gilpin and Boyden (40:587-593) who reported a low relationship between corrected level of aspiration and Design Recall Test Latency. Their study, which "used level of aspiration tasks to operation-

Table 1

Comparison of Level of Aspiration Mean Scores Between Highly anxious and Moderately anxious Subjects

Anxiety Group	Loa* Scores Mean Score	Standard Deviation	t-score**
High anxious (n=9)	3.11	2.521	1.344
Moderate anxious (n=15)	4.67	3.109	

*Level of aspiration (second aspiration discrepancy scores)

**(P>.05-df=22)

Table 2

Comparison of Level of Aspiration Mean Scores Between Moderately anxious and Low anxious Subjects

Anxiety Group	Loa* Scores Mean Score	Standard Deviation	t-score**
Moderate anxious (n=15)	4.67	3.109	1.179
Low anxious (n=7)	6.71	4.070	

*Level of aspiration (second aspiration discrepancy scores)

**(P>.05,df=20)

Table 3

Comparison of Level of Aspiration Mean Scores Between Highly anxious and Low Anxious Subjects

Anxiety Group	Loa* Scores: Mean Score	Loa* Scores: Standard Deviation	t-score**
Highly anxious (n=9)	3.11	2.521	2.057
Low anxious (n=7)	6.71	4.070	

*Level of aspiration (second aspiration discrepancy)

**($P<.05, df=14$)

Table 4

Number of Subjects Estimating Above or Below Their Actual Performances

	Anxiety Group			
Score Estimates	High	Moderate	Low	X^2
Above	5	7	4	
Below	4	8	3	.285

(X^2(df=2), P>.05)

Table 5

Mean and Standard Deviation Scores of Strength Tests and Levels of Aspiration Scores of High, Moderate, and Low anxiety Groups

Measurements	Anxiety Groups: High Anxiety n=9 Mean Score	High Anxiety n=9 Standard Deviation	Moderate Anxiety n=15 Mean Score	Moderate Anxiety n=15 Standard Deviation	Low Anxiety n=7 Mean Score	Low Anxiety n=7 Standard Deviation
First Strength Test	98.111	16.652	100.667	15.878	108.714	9.446
First Aspiration Score	90.555	49.447	98.800	15.199	109.142	9.616
Second Strength Test	95.000	13.266	100.267	14.449	102.142	13.637
Second Aspiration Score	95.333	13.219	100.600	12.235	103.571	14.351
Third Strength Test	94.888	14.286	92.200	14.507	100.285	15.660

alize anxiety over incompetence," concluded that performance on the two tasks appeared unrelated. Realli and Hall (81:1219) also reported that tempo was unrelated to changes in self-estimates as a function of success or failure. These subjects were all males, and the task was a modified version of the Design Recall Test. Their conclusion was that success or failure was experimentally imposed and independent of actual performance. However, Jones and McIntyre (52:272-276) obtained evidence that conceptual tempo is associated with differences in response bias.

The result of the present study, which showed a significant difference between the level of aspiration of High and Low anxiety subjects, seemed to be supported by the hypothesis of Lavin (57) who suggested that Low anxiety may be an indirect index of a very low level of achievement motivation, although Lavin presented no data to support his position. The present study showed that High anxiety subjects had lower mean level of aspiration scores than the Low anxiety subjects. However, Wittmaier (97:146-151) concluded in his study that Low anxiety students have lower achievement motivation than high anxious students and suggested that low test anxiety subjects may perform more effectively when they are made more anxious. His report seemed to contradict that of Smith and Winterbotton (88:379-391) who found that the students most likely to get off probation were those having the lowest anxiety.

In agreement with the present study, Atkinson and Litwin (7:52-63) suggested that subjects who scored high in achievement motive and low in anxiety (as Table Three in the present study indicated) are assumed to be higher in the motive to achieve success than in the motive to avoid failure. They also reported that subjects who scored high in achievement motive and higher in anxiety are assumed to be higher in the motive to

avoid failure than in the motive to achieve success. The result of studies by Ryan and Lakie (85:342) also predicted similar achievement motives among high and low anxious subjects.

Furthermore, in explaining the motivational behaviors of subjects with higher level of aspiration, Feather (29:129-144) stated that negative valence of failure was greater for high-confident subjects than for low-confident subjects (when performance was held constant) and that the negative valence of failure increased as the level of performance became less difficult to attain. The study by Radin et al (79:340) also indicated that subjects with the high anxiety condition and those with greater "debilitating anxiety" disclosed less about themselves than low anxiety groups. Mahone (62:252-261) was also of a strong view that there is a degree of association between unrealistic aspiration and debilitating anxiety, and that there is a significant difference between the high achievement - Low anxiety and Low achievement - High anxiety groups.

When the mean strength test scores and standard deviation were compared with the level of aspiration scores, the Low anxiety groups had higher mean strength test scores and high mean level of aspiration scores than the high and Moderate anxiety groups (see Table Five). Such high scores, according to Gruen (43:181-188) would presumably represent a relatively great need to perform competently.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Disposition to achieve is a strong personality pattern, and an individual's feeling about personal success should be dependent upon the extent to which he feels he has reached an aspired goal, not upon an absolute score obtained. Being highly skilled in a particular sport can only account for a portion of success, but having the appropriate psychological component adds another dimension to becoming a successful performer.

Many researchers agreed that anxiety level should be assessed in order to determine the manner in which an individual or group of individuals function under a competitive circumstance. A study into the relationship between anxiety and level of aspiration, therefore, could have important implications for the physical educator.

The primary purpose of this study was to investigate the relationship between anxiety and level of aspiration among physical education male students. A comparison of level of aspiration scores among high, moderate, and low anxiety groups was also carried out by the present study.

Thirty-one male physical education students, enrolled in the professional physical education classes at Eastern Illinois University, served as volunteers for the study. Each subject completed the Anxiety Scale Questionnaire (ASQ) designed by the Institute for Personality and

Anxiety Testing (IPAT) for the measurement of anxiety level. Each subject's level of aspiration scores were obtained by computing the difference between the subject's estimate of his scores and actual performance scores on grip strength tests.

The scores obtained from the anxiety questionnaire and the level of aspiration scores were used in investigating the relationship between anxiety and level of aspiration using the Pearson Product Moment Correlation method.

The t-test was applied in determining if there were any significant differences between the level of aspiration of High anxiety (Ha) and Moderate anxiety (Ma) group; between Moderate anxiety (Ma) and Low anxiety (La) group; and between High anxiety (Ha) and Low anxiety (La) group.

The chi square was the statistical method used in finding whether the three anxiety groups differ significantly in estimation of their achievement scores to be higher or below their actual scores on the strength tests.

The .05 level of significance was used in determining the significance of all the statistical tests applied in the study.

Conclusions

Based on the results of this study, and within the limitations of the study, the following conclusions are made.

1. There is no relationship between anxiety level and level of aspiration among college male physical education students.
2. There is no difference in the level of aspiration of High and Moderate anxiety subjects.
3. There is no difference in the level of aspiration of Moderate and Low

anxiety subjects.

4. There is a difference between High anxiety and Low anxiety subjects on their level of aspiration scores. High anxiety subjects showed a lower level of aspiration than Low anxiety groups.
5. There is no difference among the three anxiety groups, High, Moderate and Low, in the estimation of their achievement scores to be above or below their actual scores on strength tests.

Recommendations

On the basis of this study, the following recommendations are warranted:

1. As the review of literature indicated, there is need for further studies to determine the relationship between anxiety and level of aspiration.
2. In order to further explain the lack of significant difference in level of aspiration between High and Moderate anxiety groups; and bebween Moderate and Low anxiety groups, a study could be undertaken to include a different method for level of aspiration procedure.
3. A similar study, like the present one, could be conducted that would include subjects from a population of male and female students.
4. The literature review showed very little use of physical education activities or performances in investigating level of aspiration or achievement motives. In order to further enhance the possiblilty of predicting success in sporting situations, it is recommended that more sports performance situations be used in level of aspiration procedures.

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APPENDIX

SELF ANALYSIS FORM

CONFIDENTIAL

Inside this booklet there are forty statements about how most people feel or think at one time or another. There are no right or wrong answers. Just pick the one that is really true for you, and circle the a, b, or c answer.

Now:

1. Make sure you have put your name, and whatever the examiner asks, at the top of this page.

2. Please answer every statement. Don't skip a single one. Your answers will be entirely confidential.

3. Remember, circle the middle letter only if you cannot possibly decide on a or c.

4. Don't spend time thinking over the statement. Just mark your answer quickly, according to how you feel about it now.

It will take only ten minutes or so to finish. Hand in the booklet when you're through, unless told to do otherwise. As soon as you're told to, turn the page and begin.

STOP HERE

1. My interests, in people and ways to have fun, seem to change quite fast. (a) true, (b) in between, (c) false — a b c

2. Even if people think poorly of me, I still go on feeling o.k. about myself. (a) true, (b) in between, (c) false — a b c

3. I like to be sure that what I'm saying is right, before I join in on an argument. (a) yes, (b) in between, (c) no — a b c

4. I am inclined to let my feelings of jealousy influence my actions. (a) sometimes, (b) seldom, (c) never — a b c

5. If I had my life to live over again I'd: (a) plan very differently, (b) in between, (c) want the same — a b c

6. I admire my parents in all important matters. (a) yes, (b) in between, (c) no — a b c

7. It's hard for me to take "no" for an answer, even when I know what I'm asking is impossible. (a) true, (b) in between, (c) false — a b c

8. I wonder about the honesty of people who are more friendly than I'd expect them to be. (a) true, (b) in between, (c) false — a b c

9. In getting the children to obey them, my parents (or guardians) were: (a) usually very reasonable, (b) in between, (c) often unreasonable — a b c

10. I need my friends more than they seem to need me. (a) rarely, (b) sometimes, (c) often — a b c

11. I feel sure I could "pull myself together" to deal with an emergency if I had to. (a) true, (b) in between, (c) false — a b c

12. As a child I was afraid of the dark. (a) often, (b) sometimes, (c) never — a b c

13. People sometimes tell me that when I get excited, it shows in my voice and manner too obviously. (a) yes, (b) uncertain, (c) no — a b c

14. If people take advantage of my friendliness, I: (a) soon forget and forgive, (b) in between, (c) resent it and hold it against them. — a b c

15. I get upset when people criticize me even if they really mean to help me. (a) often, (b) sometimes, (c) never — a b c

16. Often I get angry with people too quickly. (a) true, (b) in between, (c) false — a b c

17. I feel restless as if I want something but don't know what. (a) hardly ever, (b) sometimes, (c) often — a b c

18. I sometimes doubt whether people I'm talking to are really interested in what I'm saying. (a) true, (b) uncertain, (c) false — a b c

19. I'm hardly bothered by such things as tense muscles, upset stomach, or pains in my chest. (a) true, (b) in between, (c) false — a b c

20. In discussions with some people, I get so annoyed I can hardly trust myself to speak. (a) sometimes, (b) rarely, (c) never — a b c

21. I use up more energy than most people in getting things done because I get tense and nervous. (a) true, (b) uncertain, (c) false — a b c

22. I make a point of not being absent-minded or forgetful of details. (a) true, (b) uncertain, (c) false — a b c

23. No matter how difficult and unpleasant the snags and stumbling blocks are, I always stick to my original plan or intentions. (a) yes, (b) in between, (c) no — a b c

24. I get over-excited and "rattled" in upsetting situations. (a) yes, (b) in between, (c) no — a b c

25. I sometimes have vivid, true-to-life dreams that disturb my sleep. (a) yes, (b) in between, (c) no — a b c

26. I always have enough energy to deal with problems when I'm faced with them. (a) yes, (b) in between, (c) no — a b c

27. I have a habit of counting things, such as steps, or bricks in a wall, for no particular purpose. (a) true, (b) uncertain (c) false — a b c

28. Most people are a little odd mentally, but they don't like to admit it. (a) true, (b) uncertain (c) false — a b c

29. If I make an embarrassing social mistake I can soon forget it. (a) yes, (b) in between, (c) no — a b c

30. I feel grouchy and just don't want to see people. (a) almost never, (b) sometimes, (c) very often — a b c

31. I can almost feel tears come to my eyes when things go wrong. (a) never, (b) very rarely, (c) sometimes — a b c

32. Even in the middle of social groups I sometimes feel lonely and worthless. (a) true, (b) in between, (c) false — a b c

33. I wake in the night and have trouble sleeping again because I'm worrying about things. (a) often, (b) sometimes, (c) almost never — a b c

34.	My spirits usually stay high no matter how many troubles I seem to have. (a) true, (b) in between, (c) false	a	b	c
35.	I sometimes get feelings of guilt or regret over unimportant, small matters. (a) yes, (b) in between, (c) no	a	b	c
36.	My nerves get on edge so that certain sounds, are unbearable and give me the shivers. (a) often, (b) sometimes, (c) never	a	b	c
37.	Even if something upsets me a lot, I usually calm down again quite quickly. (a) true, (b) uncertain, (c) false	a	b	c
38.	I seem to tremble or perspire when I think of a difficult task ahead. (a) yes, (b) in between, (c) no	a	b	c
39.	I usually fall asleep quickly, in just a few minutes, when I go to bed. (a) yes, (b) in between, (c) no	a	b	c
40.	I sometimes get tense and confused as I think things over I'm concerned about.	a	b	c

VITA

The writer is a native of Ibadan, Oyo State, Nigeria, born in 1952 in Kano, Nigeria, and married with two children.

He attended Kano Teacher's College from 1966 to 1970 and worked as an assistant supervisor at In-Service Teachers' Centre, Ministry of Education, Kano, from 1971 to 1972. He was engaged in the supervision of elementary school teachers in training during that period.

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